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LAHIVE & COCKFIELD			EXAMINER	
28 STATE STREET BOSTON, MA 02109			JONES, HUGH M	
			ART UNIT	PAPER NUMBER
	•		2123	
		DATE MAILED: 06/05/2002		

Please find below and/or attached an Office communication concerning this application or proceeding.

R. R.



Office Action Summary

Application No. **09/316,549**

Hugh Jones

Applicant(s)

Examiner

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Gerlovin et al.



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filled after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). 1) Responsive to communication(s) filed on May 24, 1999 2b) This action is non-final. 2a) This action is **FINAL**. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213. Disposition of Claims 4) 💢 Claim(s) <u>1-33</u> is/are pending in the application. 4a) Of the above, claim(s) is/are withdrawn from consideration. 5) Claim(s) 6) 💢 Claim(s) <u>1-33</u> is/are rejected. 7) Claim(s) is/are objected to. 8) Claims are subject to restriction and/or election requirement. **Application Papers** 9) The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on is/are a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) The proposed drawing correction filed on is: a) approved b) disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) \square The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) \square All b) \square Some* c) \square None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). *See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e). a) 🔲 The translation of the foreign language provisional application has been received. 15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1) X Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). ___ 2) X Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152) 3) X Information Disclosure Statement(s) (PTO-1449) Paper No(s). _2, 3 6) Other:

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DETAILED ACTION

Introduction

1. Claims 1-33 of U. S. Application 09/316,549 filed on 24-May, 1999, are presented for examination.

Information Disclosure Statement

- 2. In consideration of documents "A6" and "A7", the Examiner has relied on section 1.56 (Patent Rules) for guidance:
- "§ 1.56 Duty to disclose information material to patentability.
- (a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by § § 1.97(b)-(d) and 1.98. ..."
- 3. Section 1.97 (Patent Rules) prescribes the following:

"INFORMATION DISCLOSURE STATEMENT

- § 1.97 Filing of information disclosure statement.
- ...(i) If an information disclosure statement does not comply with either this section or § 1.98, it will be placed in the file but will not be considered by the Office."
- 4. Section § 1.98 discloses Content of information disclosure statement:
- "(a) Any information disclosure statement filed under § 1.97 shall include:

 (1) A list of all patents, publications, applications, or other information submitted for consideration by the Office;

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(2) A legible copy of:

(ii) Each publication or that portion which caused it to be listed;

(5) Each publication listed in an information disclosure statement must be identified by publisher, author (if any), title, relevant pages of the publication, date, and place of publication. ..."

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- 5. Note that Applicants have not listed the pages of document "A6" (Applicants have only submitted pages 3-60 to 3-62) and have not provided a date of publication. This document will not be considered because it is not in conformance with sections 1.56, 1.97 and 1.98 as discussed.
- 6. Note that document "A7)" is listed in the IDS (paper # 2) as "Oct. 95, 640 p". However, this document will not be considered for the following reasons. There is a document labeled "A7". However, there is no title page of the alleged document making it impossible to determine the author and date. Furthermore, the IDS appears to suggest that there are 640 pages. However, Applicants have only submitted pages 1-121. This document will not be considered because it is not in conformance with sections 1.56, 1.97 and 1.98 as discussed.
- 7. Applicants refer to "Pro/ENGINEER 2000i" in the specification (lines 11-13):

"The illustrative embodiment of the present invention is realized as part of a CAD/CAM package, such as Pro/ENGINEER 2000i, which is sold by Parametric Technology Corporation of Waltham, Massachusetts. The illustrative embodiment provides the ability to integrate an analysis into a feture-based model."

The Examiner has also become aware of "*Pro/Intralink*", which has been developed by the current assignee. The Examiner notes that Parametric Technology Corporation is the assignee for

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the instant application. For the reasons provided, the software package, as well as earlier versions of "*Pro/Engineer*" and "*Pro/Intralink*" are considered especially relevant to the instant application and should have been submitted to the Examiner for consideration.

- 8. As these references are not readily available to the Examiner, Applicants should provide the office with copies of the references in any response to this action.
- 9. Applicant are **reminded** of their duty to disclose all information material to the patentability of the application as per 37 C.F.R. 1.56.

Claim Objections

10. The following is a quotation of 37 C.F.R. \S 1.75 (d)(1):

The claim or claims must conform to the invention as set forth in the remainder of the specification and terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

11. Claim 3 is objected to because of the following. Claim 3 is missing a period.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 1-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in

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the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants appear to have relied on improperly incorporated essential matter from non-patent literature to provide an enabling written description of the claimed invention. Applicants refer

"The illustrative embodiment of the present invention is realized as part of a CAD/CAM package, such as Pro/ENGINEER 2000i, which is sold by Parametric Technology Corporation of Waltham, Massachusetts. The illustrative embodiment provides the ability to integrate an analysis into a feature-based model."

See subsequent discussion regarding incorporation by reference.

to "Pro/ENGINEER 2000i" in the specification (lines 11-13):

- 14. There is insufficient disclosure in the specification regarding the claimed features including:
 - providing a feature-based model of an object;
 - providing a analysis;
 - creating at least one feature in the model that contains the analysis;
 - adding the feature to the model of the object;
 - the analysis is an engineering analysis;
 - the analysis is provided by a program other than the CAD system;
 - a user of the CAD system defines and provides the analysis;
 - modifying the model when the analysis is performed again;
 - automatically updating the analysis feature based on the new results;
- the analysis feature creates output and wherein at least some of the output of the analysis feature is changed in the automatic updating.

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15. Applicants have only briefly referred, in the specification, to the claimed features, without providing substative detail, to enable one skilled in the art to which it pertains, or with which it is

most nearly connected, to make and/or use the invention without undo experimentation.

16. Claims 1-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. Applicants appear to have relied on improperly incorporated

essential matter from non-patent literature to provide written description of the claimed invention.

Applicants refer to "Pro/ENGINEER 2000i" in the specification (lines 11-13):

"The illustrative embodiment of the present invention is realized as part of a

CAD/CAM package, such as Pro/ENGINEER 2000i, which is sold by Parametric Technology

Corporation of Waltham, Massachusetts. The illustrative embodiment provides the ability to

integrate an analysis into a feature-based model."

See subsequent discussion regarding incorporation by reference.

17. There is insufficient disclosure in the specification regarding the claimed features including:

- providing a feature-based model of an object;
- providing a analysis;
- creating at least one feature in the model that contains the analysis;
- adding the feature to the model of the object;
- the analysis is an engineering analysis;
- the analysis is provided by a program other than the CAD system;

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- a user of the CAD system defines and provides the analysis;

- modifying the model when the analysis is performed again;

- automatically updating the analysis feature based on the new results;

- the analysis feature creates output and wherein at least some of the output of the analysis

feature is changed in the automatic updating.

18. Applicants have not provided sufficient written description, in the specification, of the

claimed features, to reasonably convey to one skilled in the relevant art that the inventor(s), at the

time the application was filed, had possession of the claimed invention.

19. The Examiner therefore requests a copy of the *computer code* so as to determine what

constituted the invention, at the time of filing.

20. There are a number of issues relating to incorporation by reference which are addressed as

they are germane to the 112(1) rejections, as indicated earlier.

21. Section 2163.02 of the MPEP Standard for Determining Compliance With the Written

Description.

"The courts have described the essential question to be addressed in a description requirement issue in a variety

of ways. An objective standard for determining compliance with the written description requirement is, "does the

description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed." In

re Gosteli, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under Vas-Cath, Inc. v. Mahurkar, 935 F.2d

1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant

must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in

possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency

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of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." Ralston Purina Co. v. Far-Mar-Co., Inc., 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

Whenever the issue arises, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed. The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement. If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application. This conclusion will result in the rejection of the claims affected under 35 U.S.C. 112, first paragraph - description requirement, or denial of the benefit of the filing date of a previously filed application, as appropriate. 220 F.3d 1345, 55 U.S.P.Q.2d (BNA) 1636 (Fed. Cir. 2000)."

22. Enablement and written description are separate and distinct issues as it relates to the question of incorporation by reference. A rejection based on the enablement requirement of the statute may not be sustainable in this regard since the general incorporation of a U.S. patent by reference in appellant's specification may be sufficient to indicate what is likely to be known by persons of ordinary skill in the art. Cf. In re Howarth, 654 F.2d 103, 210 USPQ 689 (CCPA 1981).

The issue of compliance with the description requirement, however, is another matter entirely. In this connection, attention is directed to In re Blaser, 556 F.2d 534, 194 USPQ 122, 125 (CCPA 1977). The function of the description requirement is to ensure that the applicant had possession, as of the filing date of his application, of the specific subject matter later claimed by him. It is required

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that the specification describe the invention sufficiently for those of ordinary skill in the art to recognize that the applicant invented the subject matter he now claims. In re Smythe, 480 F.2d 1376, 178 USPQ 279, 284 (CCPA 1973). That a person skilled in the art, given the incorporated disclosures, might decide to combine the teachings with those explicitly disclosed by Applicants is not a sufficient indication to that person that such is described as a particular feature of appellant's invention. The doctrine of incorporation by reference is of no avail to applicants in this regard since there is no specific indication in the instant specification of the particular features disclosed by the incorporated references which correspond to those as claimed; nor does the specification identify the specific portions of the patent which applicant may have intended to rely upon to supplement his disclosure. The purpose of incorporation by reference in an application of matter elsewhere written down is for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is

- 23. Reference in the instant application to literature as if it were incorporated material is not acceptable because: 1) it was not properly incorporated and, 2) it appears to be essential matter (essential matter may not be incorporated from non-patent literature).
- 24. With respect to the claims 1-33, the structure corresponding to the recited functions can only be that which is described within the four corners of the instant patent specification.
- 25. The following is a quotation of the second paragraph of 35 U.S.C. 112:

to be found. In re de Seversky, 474 F.2d 671, 177 USPQ 144, (CCPA 1973).

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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26. Claims 7, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

in that it fails to point out what is included or excluded by the claim language. This claim is an

omnibus type claim. It is unknown what constitutes "a program other than the CAD system".

Claim Interpretation

27. The broadest reasonable interpretation has been given to the claims. The lack of detail in the

specification requires interpretation in order to carry out a prior art search. It is interpreted that

Applicant's invention is a parametric feature based model in a CAD system which uses external

programs to carry out supplemental analysis which are then integrated into the CAD design.

28. Claims 1-33 have not been interpreted in view of 35 U.S.C. 112, and *In re Donaldson*, 16

F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). Reciting the pertinent section of 35 U.S.C. 112,

paragraph six:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without

the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure,

material, or acts described in the specification and equivalents thereof.

29. With respect to the claims 1-33, the structure corresponding to the recited functions can only

be that which is described within the four corners of the instant patent specification.

30. The Examiner makes the following interpretations. Claims 1, 9, 14, 19, 32 are method claims,

and claims 23, 27, 30, 31 are "computer-readable medium" claims.

31. The claims will be interpreted as discussed for purposes of a prior art rejection.

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Double Patenting

32. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded

in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper

timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment

by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re

Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ

761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington,

418 F.2d 528, 163 USPQ 644 (CCPA 1969).

33. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to

overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application.

See 37 CFR 1.130(b).

34. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal

disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

35. Claims 1, 7, 14, 18-19, 23, 27, 30-32 are provisionally rejected under the judicially

created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8,

24 of copending Application No. 09/318,105. Although the conflicting claims are not identical,

they are not patentably distinct from each other because they are all directed to using external

applications to inport an analysis to a feature based CAD system.

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36. This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

Claim Rejections - 35 USC § 102

37. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

38. A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use

or on sale in this country, more than one year prior to the date of application for patent in the United States.

39. Claims 1-33 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Sebastian et al. or Johnson or Rabemanantsoa or Kalyan-Seshu et al..

- Sebastian et al. disclose a computer-based engineering design system to design a part, a

tool to make the part, and the process to make the part. The design system has a processor and a

memory. The memory stores feature templates, each feature template being a representation of a

primitive object having a form and a function. Each feature template is indexed by the function of

the primitive object and includes a representation of a primitive geometric entity having the form of

the primitive object. Each feature template can include information relating to a tool to make the

primitive object and a process to make the primitive object. The design system also includes an

input device for receiving a request to design the part. This request includes one or more

predetermined functions that the part performs. A core design module, executable by the

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the plurality of feature templates in the memory to locate one or more primitive objects that perform the one or more predetermined functions. In particular, Sebastian et al. disclose providing a feature-based model of an object; providing a analysis; creating at least one feature in the model that contains the analysis; adding the feature to the model of the object; the analysis is an engineering analysis; the analysis is provided by a program other than the CAD system; a user of the CAD system defines and provides the analysis; modifying the model when the analysis is performed again; automatically updating the analysis feature based on the new results; the analysis feature creates output and wherein at least some of the output of the analysis feature is changed in the automatic updating. See fig. 6-7; col. 1, line 60 to col. 8, line 63; col. 11, lines 15-31; col. 18, lines 30-62; col. 20, lines 61-67.

- *Johnson* discloses providing a feature-based model of an object; providing a analysis; creating at least one feature in the model that contains the analysis; adding the feature to the model of the object; the analysis is an engineering analysis; the analysis is provided by a program other than the CAD system; a user of the CAD system defines and provides the analysis; modifying the model when the analysis is performed again; automatically updating the analysis feature based on the new results; the analysis feature creates output and wherein at least some of the output of the analysis feature is changed in the automatic updating. See fig. 8; col. 22, lines 8-52.
- Rabemanantsoa discloses "Knowledge-based system for assembly process-planning."

 Rabemanantsoa further discloses the feasibility of coupling AI (artificial intelligence) with an

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object-oriented database in the CAD/CAM environment. The products or parts are designed with the parametric and feature-based solid modeling Pro/Engineer. The authors go beyond data structures to integrate information about the assembly knowledge base. They design an object-oriented database called SISDES for modeling the data along with handling logic based reasoning of graph representation. The output is a knowledge-based system which integrates automated feature-recognition plus position and orientation needed for part mating. In this context, they define the possibility of contact and relative mobility for each pair of components. This latter becomes part of an AI module called XGEN (Assembly Sequences Generation) developed for knowledge processing and generating assembly sequence, i.e. the CAM activities. In particular, Rabemanantsoa discloses providing a feature-based model of an object; providing a analysis; creating at least one feature in the model that contains the analysis; adding the feature to the model of the object; the analysis is an engineering analysis; the analysis is provided by a program other than the CAD system; a user of the CAD system defines and provides the analysis; modifying the model when the analysis is performed again; automatically updating the analysis feature based on the new results; the analysis feature creates output and wherein at least some of the output of the analysis feature is changed in the automatic updating. See section 3.1.

- Kalyan-Seshu et al. disclose "Towards computer aided design for the life cycle."

Kalyan-Seshu et al. disclose that a growing concern about the environment has motivated research into environmentally conscious design and manufacturing approaches, placing new burdens on designers. In order to aid designers in their new tasks, one of our objectives is to minimize the

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gathering of information and maximize the utility of existing design information. In the research

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discussed in this paper, the specific focus is to enable the quantification and enhancement of product

assemblability, serviceability, remanufacturability, recyclability, demanufacturability, and life cycle

impact during product design. Guidelines for integrating some of the commercially available CAD

packages (I-DEAS and Pro/ENGINEER) to these assessment models, and ways to use the input

information to some these assessments for making other assessments are developed. In particular,

Kalyan-Seshu et al. disclose providing a feature-based model of an object; providing a analysis;

creating at least one feature in the model that contains the analysis; adding the feature to the model

of the object; the analysis is an engineering analysis; the analysis is provided by a program other than

the CAD system; a user of the CAD system defines and provides the analysis; modifying the model

when the analysis is performed again; automatically updating the analysis feature based on the new

results; the analysis feature creates output and wherein at least some of the output of the analysis

feature is changed in the automatic updating. See abstract; section I, V.

Conclusion

40. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

- Parametric Technology Corporation - 12/1997 - hand numbered pages 1-29: various

disclosures from the company webpage pertaining to "Pro/Engineer"; "Pro/Web.Link";

"Pro/Intralink"; and company news pertaining to releases of software products.

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41. Any inquiry concerning this communication or earlier communications from the examiner should be:

directed to: Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET, *or* the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to: Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 308-9051 (for formal communications intended for entry) or (703) 308-1396 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Dr. Hugh Jones

June 2, 2002

DR. HUGH M. JONES

DR. HUGH EXAMINER

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